



Attorney Ref. No. 90885U

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Thomas James McARTHUR

Confirmation No.: 2136

Appl. No.: 10/521,380

Examiner: Patricia A. Leith

Filed: January 6, 2006

Art Unit: 1655

Title: **FRUIT AND/OR VEGETABLE DERIVED COMPOSITION****DECLARATION OF EXPERT WITNESS****PURSUANT TO 37 C.F.R. § 1.132**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

I, R. Neal Peterson., declare as follows:

1. I am founder in 1988 of the PawPaw Foundation, a 501c3 nonprofit organization devoted to the advancement of the North American Pawpaw *Asimina triloba* as a new fruit crop for the United States and other humid temperate regions of the world. I am its current president since 2008. I am also founder and manager of Peterson Pawpaws LLC, based in Harper's Ferry, West Virginia, a commercial enterprise involved in the production, sale and promotion exclusively of Pawpaw *Asimina* species trees and fruit. I have held this position since January 1999. (See [www.petersonpawpaws.com](http://www.petersonpawpaws.com))

2. I have a Master's degree in Plant Genetics from West Virginia University (1976) and a doctoral education in Agricultural Economics from Michigan State University (ABD). Prior to my current position, I was employed as an Agricultural Economist with the USDA-Economic Research

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Service from 1980 to 1998. Currently, I have ongoing cooperative research projects with other experts on Pawpaw *Asimina* species, including with Dr. Kirk W. Pomper, curator of the USDA National Clonal Germplasm Repository for *Asimina* species, Kentucky State University, the largest *Asimina* species germplasm collection in the world. I also lecture to groups about the importance and benefits of Pawpaw *Asimina triloba*. I was awarded the Betsy Lydon Ark Award in 2006 from Slow Food USA for my work with Pawpaw *Asimina triloba*, an honor given to a leader determined to promote and preserve traditional foods and sustainable agricultural practices. I have been studying pawpaw *Asimina* species since 1975. I am the named inventor on three issued U.S. plant patents directed to *Asimina* pawpaw species: PP14,452, PP14,453, and PP15,900 (Classified in Class/Subclass PLT/156). These are the only U.S. plant patents directed to an *Asimina* pawpaw species that I am aware of.

3. The origin of the term "pawpaw" for *Asimina* species is unknown, though some believe the term may have originated in the early 17<sup>th</sup> Century with John Smith's founding of Jamestown Virginia where the settlers may have thought the unknown fruit of *Asimina* was a *Carica* species, which was known to the Spanish and the English in Cuba and the Caribbean islands at that time. Pawpaw *Asimina* species are unique in that they are the only temperate members of the *Annonaceae* family, and no other members of the *Annonaceae* family have been called "pawpaw". Further, Pawpaw *Asimina* species require approximately 400 hours of chilling to break dormancy, and thus will not easily grow in sub-tropical zones (e.g., near the Gulf of Mexico) where extended cold periods are rare or non-existent. Pawpaw *Asimina* species are gradually being introduced outside the United States as a specialized crop. Some very limited domesticated planting of Pawpaw *Asimina* species has occurred only recently in other temperate areas outside of North America, such as, for example, in Italy, Germany, Australia Japan and China.

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4. In my experience, the term "pawpaw" and its variant spellings "paw paw" and "papaw" are commonly used outside of the United States to refer to the common tropical *Carica* species, such as *Carica papaya*. In the United States, *Carica papaya* is commonly referred to as "Papaya". However, outside the United States, *Carica papaya* is commonly referred to as "Pawpaw" in the English speaking world. Horticulturally and commercially, *Carica* species are much more common worldwide than *Asimina* species. *Carica* species are common in tropical and sub-tropical geographic zones worldwide, and probably were originally native to Central America. In contrast, *Asimina* species are native to temperate forests of eastern and southern United States, and cannot grow in tropical regions and only grow in sub-tropical regions with special care. Accordingly, Pawpaw *Carica* species will not be found growing in the same locales as the Pawpaw *Asimina* species.

5. For these reasons, vast commercial differences exist in the worldwide production of *Carica* species as compared to *Asimina* species. Due to the widespread distribution and popularity of pawpaw *Carica* species across the world's tropical and sub-tropical zones, commercial availability of pawpaw *Carica* fruit can be attained virtually year round. Moreover, worldwide commercial production of *Carica* fruit is in the millions of metric tons and encompasses a diverse array of tropical and sub-tropical cultures and countries. In contrast, commercial production and sale of *Asimina* pawpaw fruit or processed fruit is not widely available, being largely found at farmers' markets in select cities and towns of eastern and southern United States during its short fruiting season of late August to early October. Some large US specialty food distributors, such as Earthly Delights and Heritage Foods USA, are beginning to make *Asimina* pawpaw fruit available on a seasonal basis.

6. In general, I have commonly found that many English-speakers residing outside of North America are not aware that *Asimina* "pawpaw" species native to temperate North American even

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exist, let alone that the term "pawpaw" can refer to such species. I often receive correspondence from English-speakers residing outside of North America who use the term "pawpaw" solely to refer to *Carica* species. For example, I commonly receive e-mail or letters from persons in tropical or sub-tropical zones outside of the United States who are contacting Peterson Pawpaws to obtain information about "pawpaws" or to purchase "pawpaw" trees. However, with most of these inquiries from tropical areas, the correspondents are inquiring about *Carica* species. In these instances, the correspondents are clearly using the term "pawpaw" solely to refer to *Carica* species, and appear to be totally unaware that the term "pawpaw" is commonly used in the United States to refer to the unrelated North American *Asimina* species. In general, it is my experience that among English-speakers residing outside of North America, the use of the term "pawpaw" is commonly used to clearly and definitely refer to the *Carica* pawpaw species. Similarly, it is also my general experience that non-American English-speakers residing in tropical and sub-tropical regions are commonly not aware that the term "pawpaw" can be used in the United States to refer to the less common temperate North American *Asimina* species.

7. The fruit of *Asimina* "pawpaw" species is only consumed by people when the fruit is ripe because the unripe fruit of *Asimina* is wholly unpalatable. In contrast, I understand that the *Carica* "pawpaw" fruit is commonly used as food both in its unripe "green" form and in its ripe form. For example, the Biriani rice recipe from coastal Kenya found at <http://nutford.kijabe.org/recipes.html> refers to the use of "unripe" "pawpaw" which in my opinion can only be referring to the *Carica* "pawpaw" species. A copy is attached to the Appendix herewith. The term "pawpaw" used in the recipe would not be confused with the *Asimina* "pawpaw" species because (1) the recipe originates from the tropical coastal region of Kenya which commonly uses the British English term "pawpaw" only to refer to *Carica* species; (2) *Asimina* species do not exist in Kenya; (3) in my experience, persons from tropical regions of Africa are generally not aware of *Asimina* "pawpaw" species; and (4) persons

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familiar with using and cooking *Asimina* fruit would not suggest cooking unripe *Asimina* "pawpaw" fruit. Accordingly, this African recipe is consistent with my understanding that the term "pawpaw" is widely recognized by non-American English speakers around the world as the common term for clearly and definitely describing *Carica* species.

8. I have reviewed the UN FAO INPHO Compendium Chapter XXII entitled "Pawpaw". This chapter begins at [http://www.fao.org/inpho/content/compend/text/CH22\\_01.htm](http://www.fao.org/inpho/content/compend/text/CH22_01.htm). The term "Pawpaw" is used throughout the text, Tables, and Figure Legends to refer to *Carica* species. This UN report is consistent with my understanding that the term "pawpaw" is widely recognized by non-American English speakers around the world as the common term for clearly and definitely describing *Carica* species.

9. I have reviewed the "pawpaw" information sheet published by The Royal Botanic Gardens (Kew Gardens) of Great Britain which provides information sheets on numerous plants at their website. The Royal Botanic Gardens, the central botanical authority of Great Britain and the British Commonwealth, uses the term "pawpaw" in its hyperlink and throughout its published pawpaw information sheet found at <http://www.kew.org/ksheets/pawpaw.html> to refer to the *Carica* species. A copy is attached to the Appendix herewith. This pawpaw information sheet issued by the central botanical authority of Great Britain and the British Commonwealth, is consistent with my understanding that the term "pawpaw" is widely recognized by non-American English speakers, in particular British English speakers, in both temperate and tropical regions around the world, as the common term for clearly and definitely describing *Carica* species.

10. Horticultural experts specializing in *Asimina* pawpaw species understand that the term "pawpaw" is widely used outside of the United States to commonly, clearly, and definitely refer to

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*Carica* pawpaw species throughout the tropical and sub-tropical regions of the English speaking world. These horticultural experts also recognize that they cannot change the common parlance of millions of English speakers.

11. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

14 April 2010  
Date



R. Neal Peterson  
Founder & Manager  
Peterson Pawpaws LLC